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US006286780B1

(12) **United States Patent**
Yuyama et al.

(10) Patent No.: **US 6,286,780 B1**
(45) Date of Patent: ***Sep. 11, 2001**

(54) **METHOD OF ADJUSTING TENSION
APPLIED TO SHEET, AND DEVICE FOR
THE SAME**

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

This patent is subject to a terminal dis-
claimer.

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(21) Appl. No.: **09/533,436**

(22) Filed: **Mar. 23, 2000**

Related U.S. Application Data

(62) Division of application No. 09/315,045, filed on May 20,
1999, which is a division of application No. 09/111,477,
filed on Jul. 8, 1998, now Pat. No. 5,967,445, which is a
continuation-in-part of application No. 08/927,320, filed on
Sep. 11, 1997, now abandoned.

(30) Foreign Application Priority Data

Sep. 20, 1996	(JP)	8-250492
Sep. 22, 1997	(JP)	9-257175
Sep. 19, 1998	(JP)	9-254891

(51) Int. Cl.⁷ **B65H 16/04; B65H 23/08**

(52) U.S. Cl. **242/563; 242/421.4; 242/597.6**

(58) Field of Search **242/421.1, 421.2,
242/421.4, 420.5, 597.6, 333.7, 334.4, 334.3,
563, 563.2, 597.2, 597.1, 611, 534.2, 534**

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(57) ABSTRACT

To prevent disalignment of the edges of a folded sheet by smoothly feeding the sheet to a packaging unit while keeping tension fluctuations to a minimum when the sheet is unwound from a paper roll set in a paper feed unit even though the paper roll diameter decreases gradually as the sheet is unwound. A sheet length measuring sensor or rotary encoder is provided in the paper feed path through which the packaging sheet is fed toward the packaging unit. An angle sensor is provided which includes Hall element sensors provided on a support shaft and magnets provided on a core pipe of the paper roll. Any change in the signals from one of these sensors relative to the signal from the other sensor is used to calculate the paper roll winding length, and the sheet tension is adjusted to an optimum, constant level by controlling the sheet braking force stepwise according to the roll diameter measured by the sensors.

3 Claims, 13 Drawing Sheets

